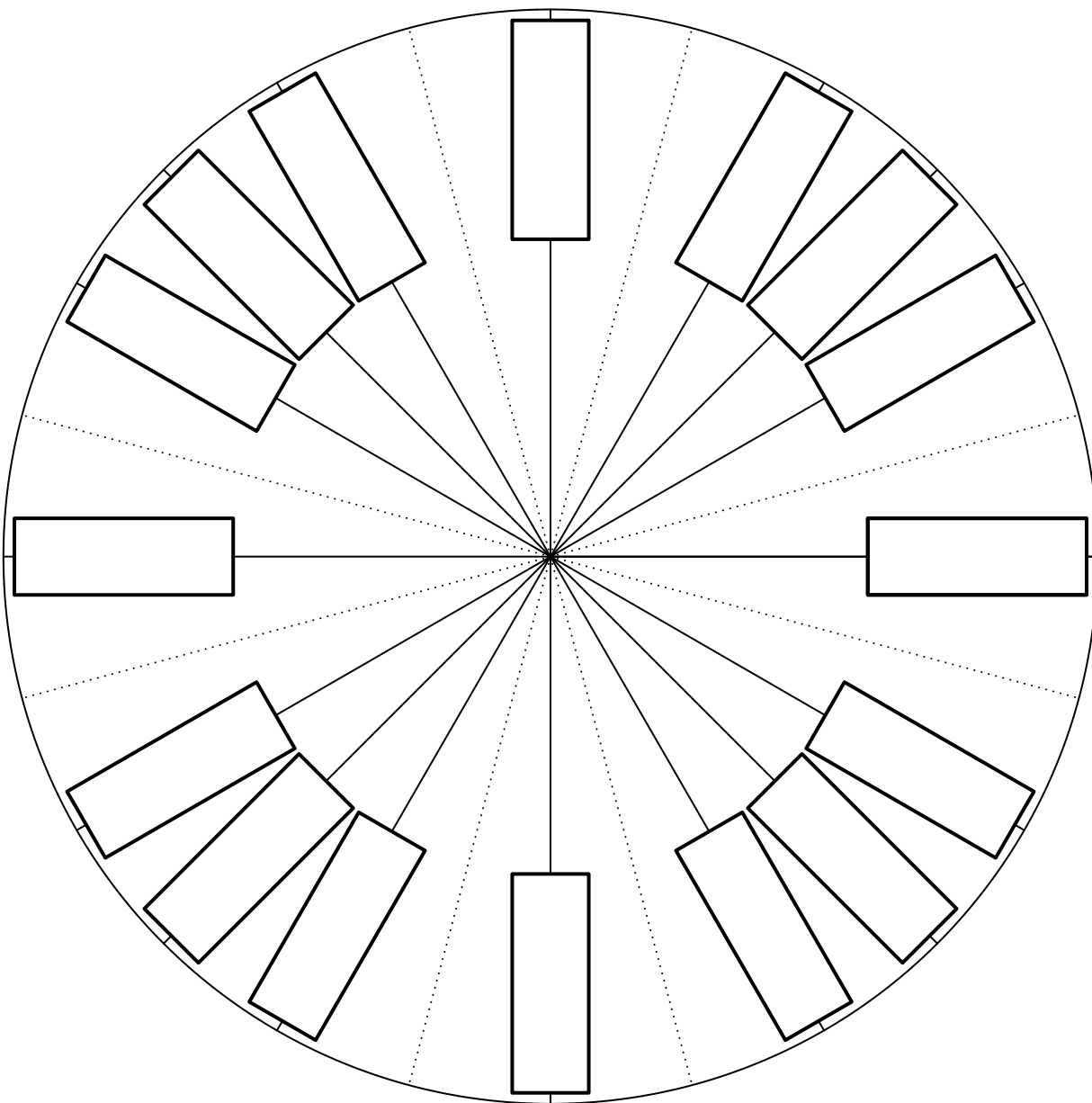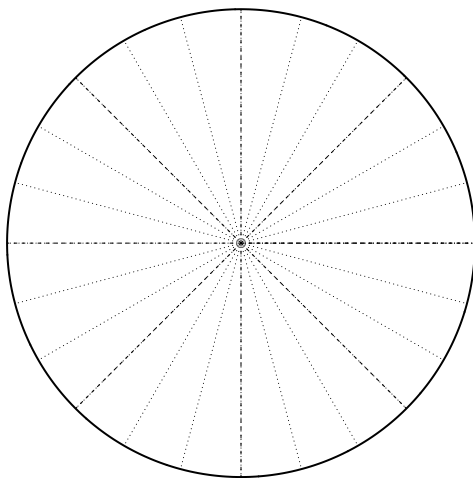# u12 Radians, Degrees, and Arc Length EXAM (version 125)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.
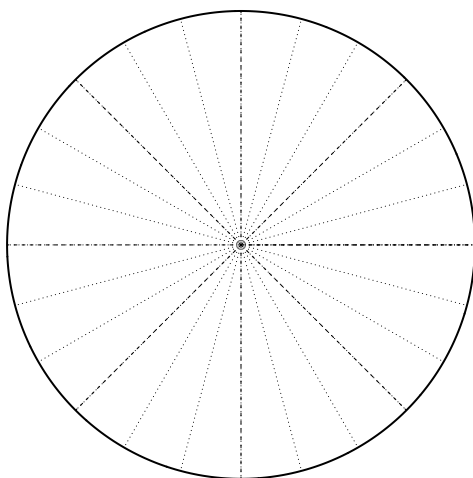
u12 Radians, Degrees, and Arc Length EXAM (version 125)

2. On the circle below, draw a sketch of a **-960⁰** angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.

3. On the circle below, draw a sketch of a $\dfrac{-29\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.
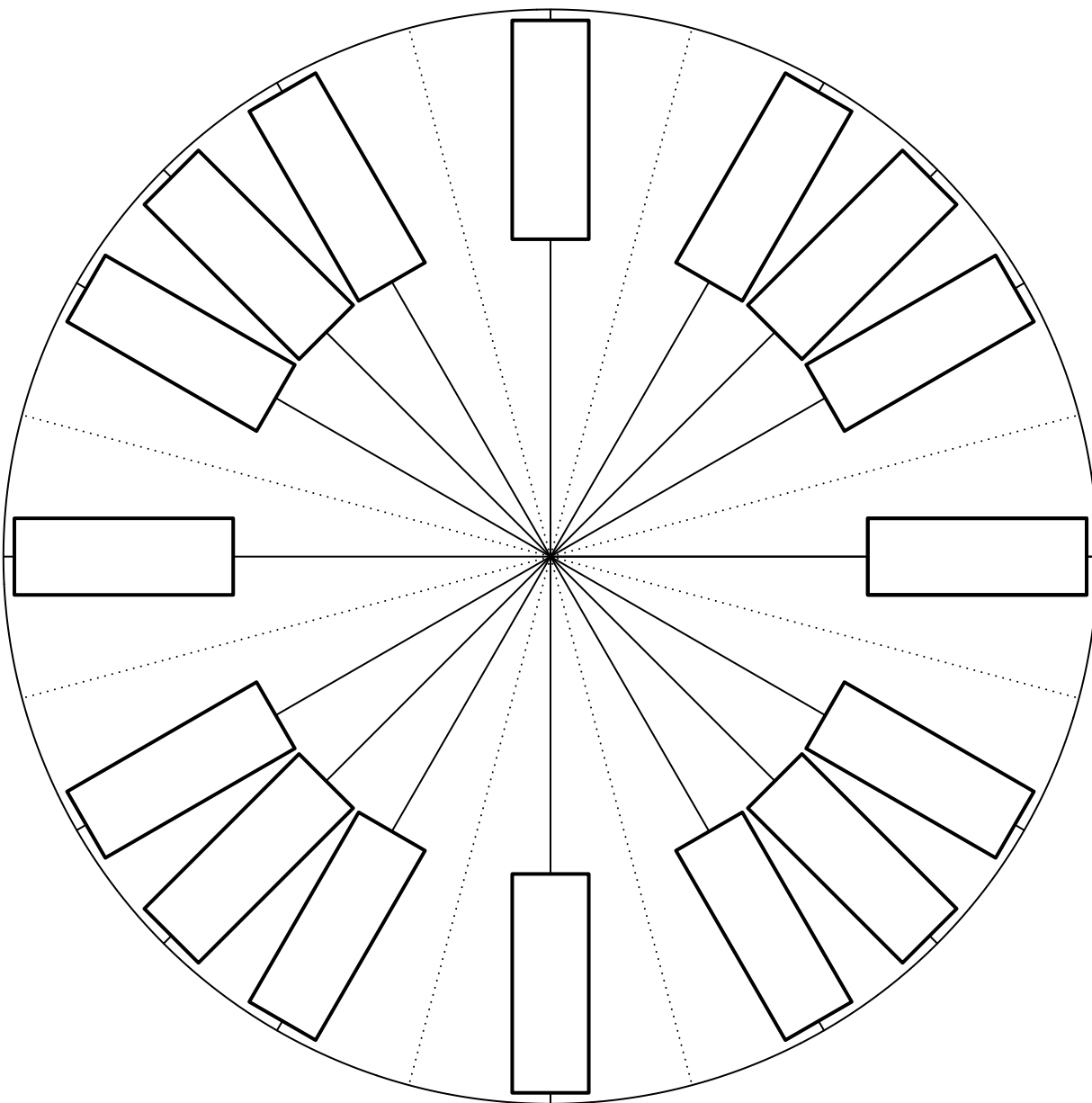
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals θ radians. The arc length equals 20 meters. Find θ.
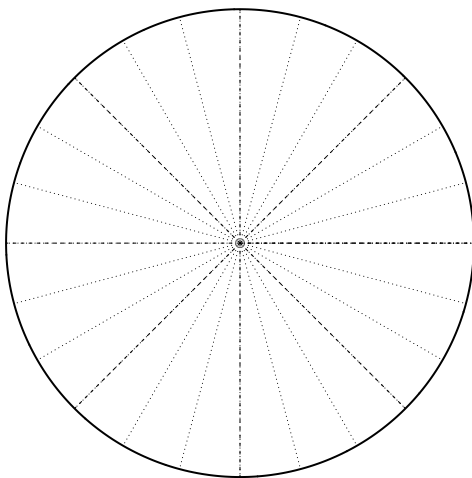
u12 Radians, Degrees, and Arc Length EXAM (version 119)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.
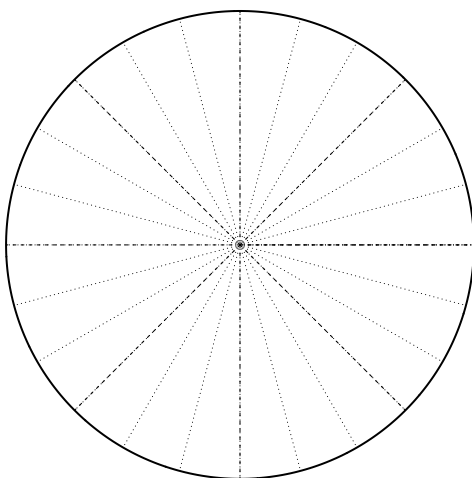
u12 Radians, Degrees, and Arc Length EXAM (version 119)

2. On the circle below, draw a sketch of a **-1290⁰** angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.

3. On the circle below, draw a sketch of a $\dfrac{-8\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.
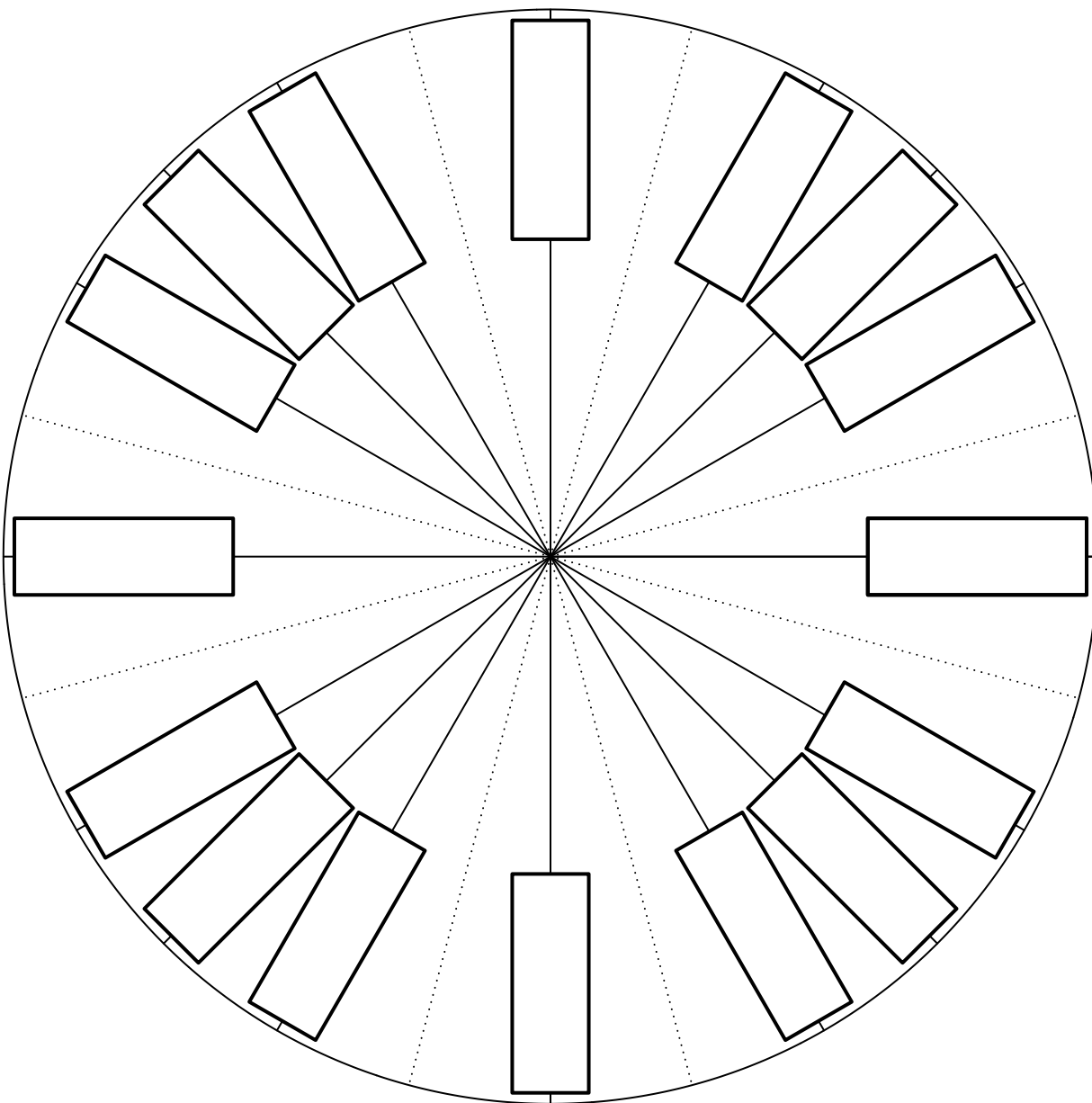
4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 5 radians. The arc length equals L meters. Find L.
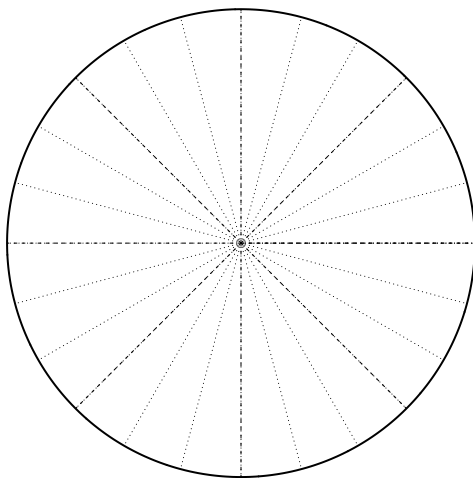
u12 Radians, Degrees, and Arc Length EXAM (version 110)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.

u12 Radians, Degrees, and Arc Length EXAM (version 110)

2. On the circle below, draw a sketch of a **-780⁰** angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.

3. On the circle below, draw a sketch of a $\dfrac{-19\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.

4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 5 radians. The arc length equals L meters. Find L.

u12 Radians, Degrees, and Arc Length Solution (version 125)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.
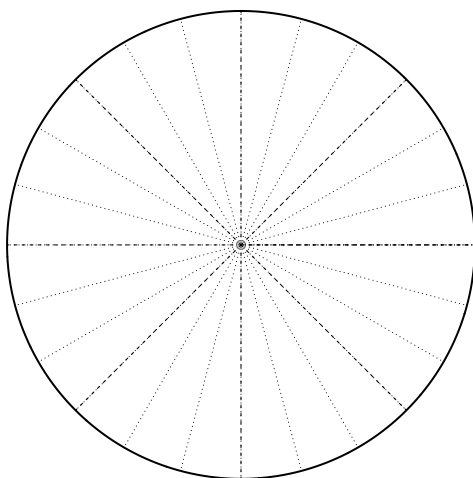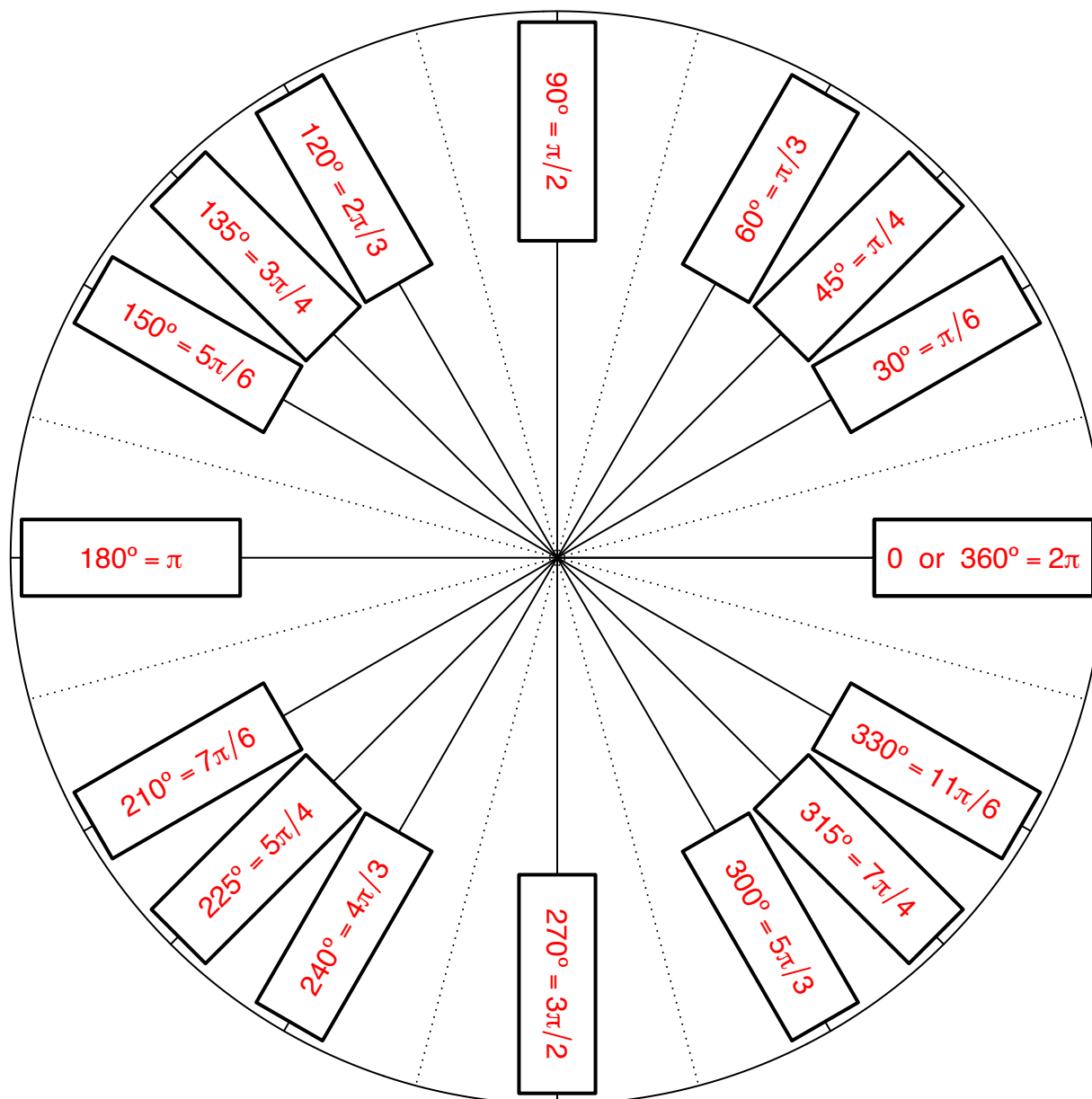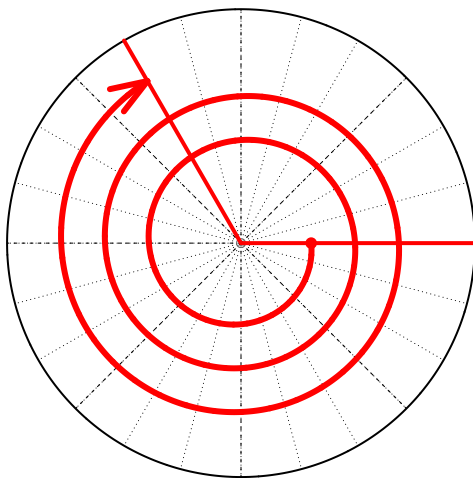
u12 Radians, Degrees, and Arc Length Solution (version 125)

2. On the circle below, draw a sketch of a **-960°** angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.

3. On the circle below, draw a sketch of a $\dfrac{-29\pi}{4}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.

4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals θ radians. The arc length equals 20 meters. Find θ.

$$\theta = \frac{L}{r} = \frac{20}{4} = 5$$

u12 Radians, Degrees, and Arc Length Solution (version 119)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.
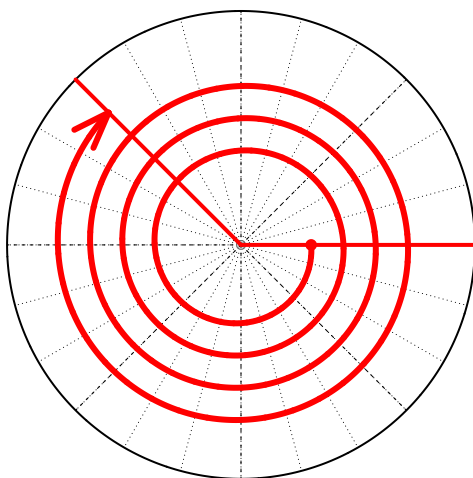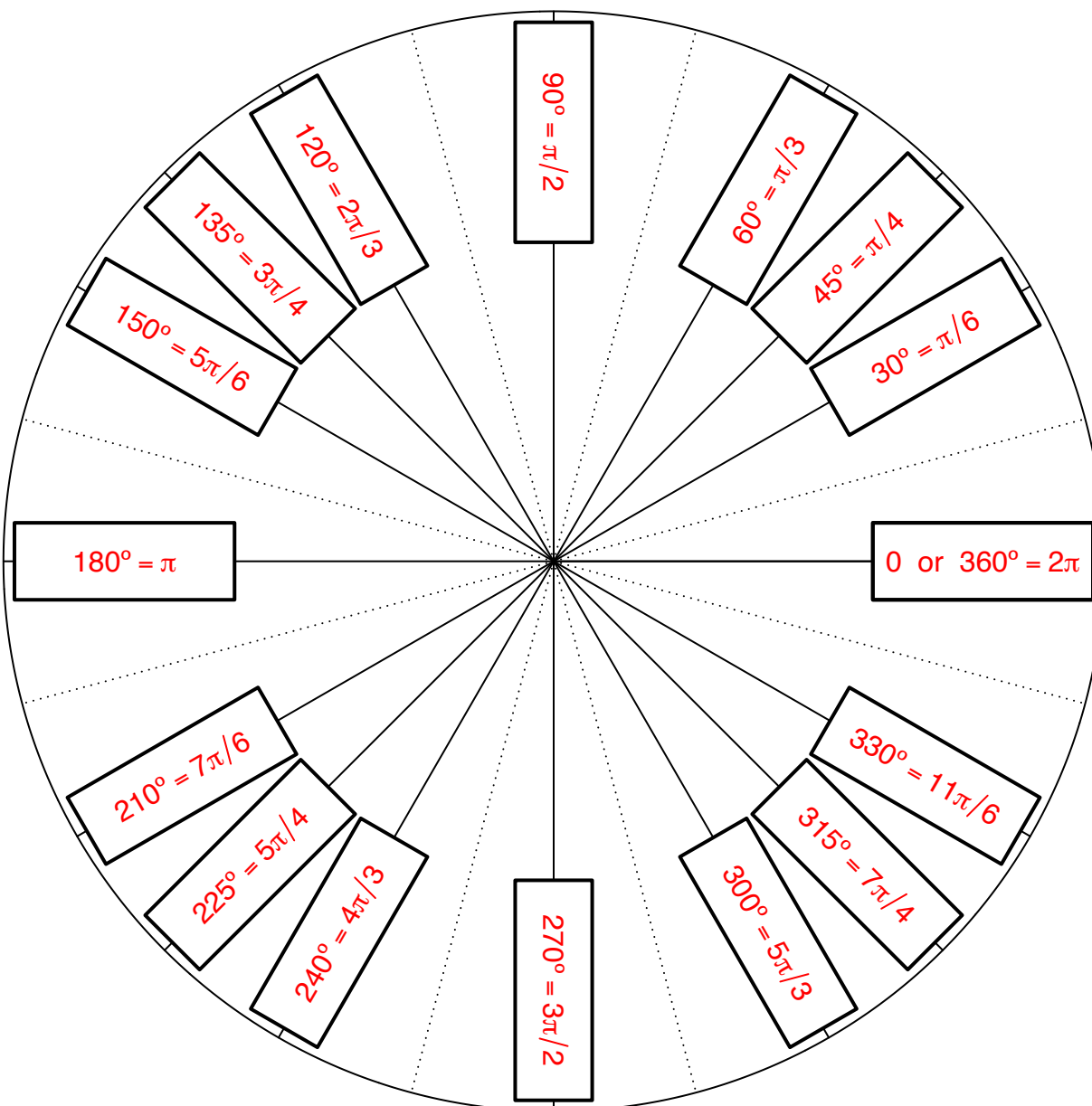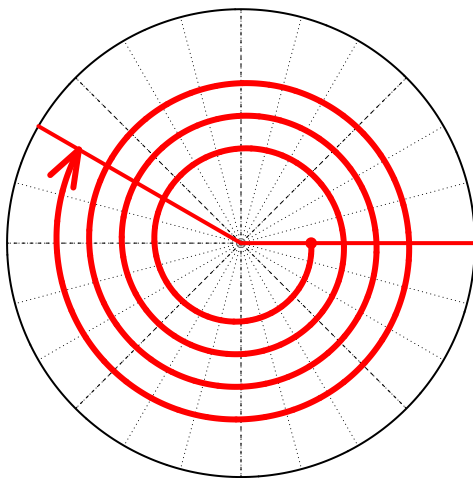

- $90° = \pi/2$
- $120° = 2\pi/3$
- $135° = 3\pi/4$
- $150° = 5\pi/6$
- $60° = \pi/3$
- $45° = \pi/4$
- $30° = \pi/6$
- $180° = \pi$
- 0 or $360° = 2\pi$
- $210° = 7\pi/6$
- $225° = 5\pi/4$
- $240° = 4\pi/3$
- $270° = 3\pi/2$
- $300° = 5\pi/3$
- $315° = 7\pi/4$
- $330° = 11\pi/6$

u12 Radians, Degrees, and Arc Length Solution (version 119)

2. On the circle below, draw a sketch of a **-1290º** angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.

3. On the circle below, draw a sketch of a $\dfrac{-8\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.

4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 5 radians. The arc length equals L meters. Find L.

$$L = r\theta = 4 \cdot 5 = 20$$

u12 Radians, Degrees, and Arc Length Solution (version 110)

1. Write in the angles, in **degrees and radians**. Please put the angles in their standard locations, and put radians in exact, and simplified, form.
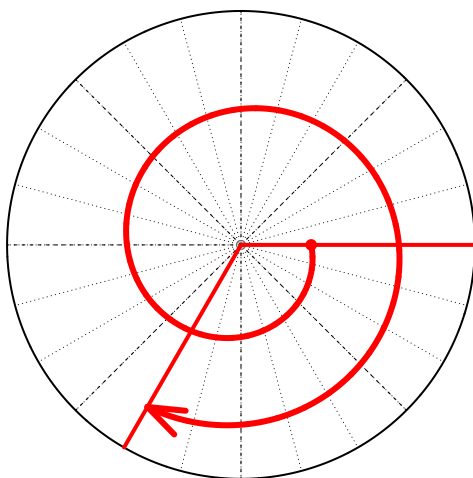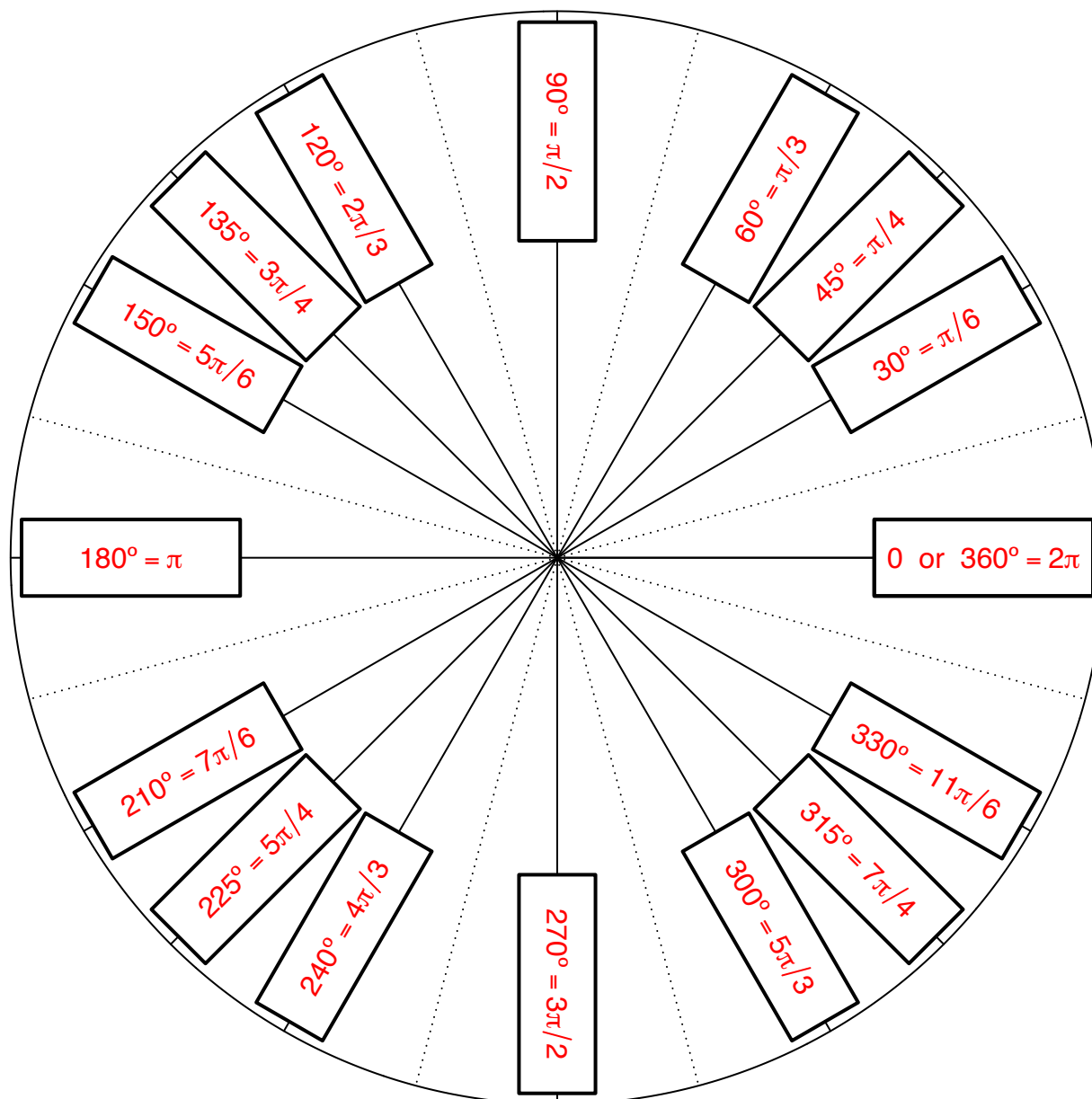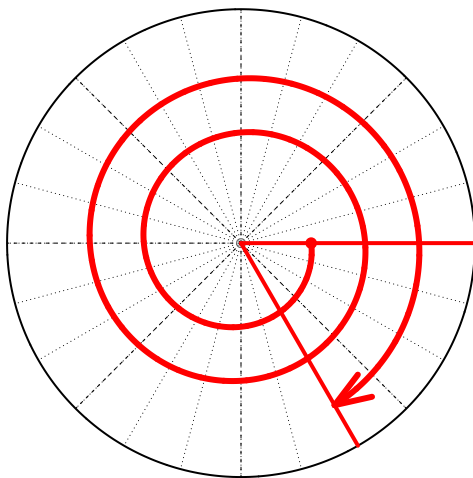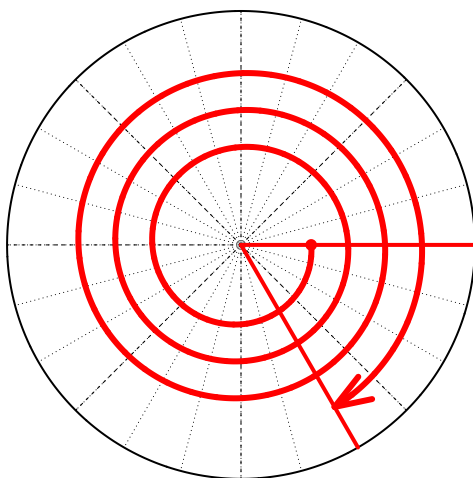
u12 Radians, Degrees, and Arc Length Solution (version 110)

2. On the circle below, draw a sketch of a **-780º** angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the angle. For your reference, the first few multiples of 360 are 360, 720, 1080, and 1440.

3. On the circle below, draw a sketch of a $\dfrac{-19\pi}{3}$ angle in standard position. Include the initial ray, the terminal ray, and the spiral arrow indicating direction and full extent of the rotation.

4. Imagine a circle with a central angle subtending an arc. The radius equals 4 meters. The central angle equals 5 radians. The arc length equals L meters. Find L.

$$L = r\theta = 4 \cdot 5 = 20$$